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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/505,678	02/17/2000	Lawrence Stallman	2135.650	7646

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[REDACTED] EXAMINER

SAADAT, CAMERON

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3713

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

	Application No.	Applicant(s)
	09/505,678	STALLMAN ET AL.
	Examiner Cameron Saadat	Art Unit 3713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

THE MAILING DATE OF THIS COMMUNICATION. In no event, however, may a reply be timely filed

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 7/31/00.
 2b) This action is non-final.
 2a) This action is FINAL.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-38 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-38 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on 31 July 2000 is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5&6.

4) Interview Summary (PTO-413) Paper No(s). _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other:

DETAILED ACTION

In response to preliminary amendments filed on July 31, 2000, claims 1-38 are pending in this application. Note that claim 39 has been renumbered to 38 as it is the next higher number in the sequence of the claims. In addition, the examiner has approved the drawings correction filed on 7/31/00.

Specification

1. The abstract of the disclosure is objected to because it includes improper language such as "means". Correction is required. See MPEP § 608.01(b).

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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The single means claim "a weapon mounted cursor control device", where a means recitation does not appear in combination with another recited element of means, is subject to undue breadth rejection. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983). It is noted that the specification weapon mounted cursor control device "functions in a manner similar to a conventional mouse", and the scope of the claimed weapon mounted cursor control device, the only means in the claim, covers every conceivable structure for achieving the stated property (for interfacing with a computer), is held non-enabling, for the specification disclosed at most only those known to the inventor.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, 6, 8, 11, 13, 16, 17, 20-25, 34-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claim 1, lines 21-23 and claim 2, lines 22-24, the statement "commercial-off-the-shelf or government-furnished equipment, vests, packs, or body armor" provides alternate choices, rendering the claim indefinite. In addition the term "voiceless, wireless communication means" in line 14 is unclear and confusing. It is not understood what this term is being referred to.

7. Regarding claim 6, line 7, "said respective components" is unclear, because it uncertain as to which component is being referred..

8. Regarding claim 8, line 3, "a computer" should be recited as --said computer-- so as to clarify confusion.
9. Regarding claim 16, this claim is indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. In addition, the structural elements as claimed, cannot perform any particular improved function for the portable, wearable, weapon-integrated computerized system.
10. Regarding claim 17, the antecedent basis for "said software interface" has not been clearly set forth.
11. Regarding claims 11, 13, 20-25, the preamble of these claims are not consistent with their parent claims.
12. Regarding claim 34, it is not understood as to whether it is an independent claim or a multiple dependent claim to 1 or 2. If it is an independent claim, applicant must recite all the structural elements as cited in claims 1 or 2, so as to clarify the confusion and to overcome the 112, second paragraph rejection.
13. Regarding claim 36, lines 10-11, claim 37, lines 10-11, and claim 38, lines 10-11, the statement "graphical icon or software control button" provides alternate choices, rendering the claim indefinite. In addition, the antecedent basis for "said software"(as per claim 36) is lacking. Further, the term "a cursor" (as per claim 36 line 6, claim 37 line 6, and claim 38 line 6) should be recited as --said cursor-- , so as to clarify confusion.
14. Regarding claim 35, this claim fails to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Claims 3-6, 9-15, 17-25, 27, 28, 31, 35-38 are rejected for incorporating the above errors from their respective parent claims by dependency.

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

17. Claims 1-11, 16, 17, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Gross et al. (U.S. Patent No. 5,864,481).

18. Referring to claim 1, Gross et al. discloses a man-portable modular system capable of providing a soldier with real-time situational awareness and communications capability. The system is comprised of a computer/radio and a software interface (column 13, line 13-24); wherein the radio provides data communications between squad members (column 6, line 10). Gross et al. also discloses a global positioning receiver component (i.e. the user position location device) that is interfaced with the computer module via I/O processor (column 6, line 34). Gross et al. further discloses a display for displaying information processed by a computer (column 1 line 46), and that components can be quickly removed (column 1, lines 60-64).

19. Referring to claim 2, Gross et al. also discloses a weapon communicably connected to a computer (column 7, lines 8-12).

20. Referring to claim 3, Gross et al. teaches a system wherein the modular nature of the system's components allows the system to be quickly tailored to situation – specific conditions and environments (column 3, lines 29-31).

21. Referring to claim 4, Gross et al. discloses a system wherein each of the major computer/radio subsystems are self-contained and weatherproof (column 4, lines 50-61).

22. Referring to claim 6, Gross et al. discloses an input/output device and a data relay interface of a computer wherein the power for the computer and other components is provided by a power converter via independent power source (column 6 lines 34-36 and lines 53-55). Gross et al. further discloses that the input/output device is a self-contained unit with plug-in, plug-out connectors (column 10, lines 22-24). Gross et al. also discloses data relays for routing data between components and computer (column 3, lines 21-22).

23. Referring to claim 9, Gross et al. discloses a weapon mounted cursor control device for interfacing with a computer (Fig 5, ref 550 and column 7, lines 50-56).

24. Referring to claim 11, Gross et al. discloses a weapon mounted cursor control device wherein the device comprises a first mechanism for controlling a cursor and at least a second mechanism for performing control, selection, or action functions (Remote Input Pointing Device 250 in Fig 5 and column 5, lines 55-58).

25. Referring to claim 5, Gross et al. discloses an input/output device and a data relay interface of a computer wherein the power for the computer and other components is provided by a power converter via independent power source (column 6 lines 34-36 and lines 53-55). Gross et al. further discloses that the input/output device is a self-contained unit with plug-in, plug-out

connectors (column 10, lines 22-24). Gross et al. also discloses data relays for routing data between components and computer (column 3, lines 21-22).

26. Referring to claim 8, Gross et al. discloses a weapon mounted cursor control device for interfacing with a computer (Fig 5, ref 550 and column 7, lines 50-56).

27. Referring to claim 10, Gross et al. discloses a weapon mounted cursor control device wherein the device comprises a first mechanism for controlling a cursor and at least a second mechanism for performing control, selection, or action functions (Remote Input Pointing Device 250 in Fig 5 and column 5, lines 55-58).

28. Referring to claim 31, Gross et al. discloses a system wherein said system is capable of being connected to or transmitting to a high-resolution Display (column 5, lines 63-65)

29. Referring to claim 7, Gross et al. discloses an input/output device and a data relay interface of a computer wherein the power for the computer and other components is provided by a power converter via independent power source (column 6 lines 34-36 and lines 53-55). Gross et al. further discloses that the input/output device is a self-contained unit with plug-in, plug-out connectors (column 10, lines 22-24). Gross et al. also discloses data relays for routing data between components and computer (column 3, lines 21-22).

30. Referring to claim 16, Gross et al. discloses a weapon mounted cursor control device for interfacing with a computer (Fig 5, ref 550 and column 7, lines 50-56).

31. Referring to claim 17, Gross discloses a weapon mounted cursor control device wherein the device comprises a first mechanism for controlling a cursor and at least a second mechanism for performing control, selection, or action functions (Remote Input Pointing Device 250 in Fig 5 and column 5, lines 55-58).

Claim Rejections - 35 USC § 103

32. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 148 USPQ 459, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or unobviousness.

33. Claims 12, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al. (U.S. Patent No. 5,864,481).

As per claims 12, 13, and 18, it is noted that the teaching of Gross et al. does not specifically disclose the location of the weapon mounted cursor control device. However, such limitation of the weapon mounted cursor control device being located proximal the rear-center of the weapon grip is old and well known, and is considered an arbitrary obvious design choice, so as to permit the soldier to interact with the computer without removing his/her hands from the weapon.

34. Claims 14, 15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al. in view of Hawkes et al. (U.S. Patent No. 6,269,730B1).

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Regarding claims 14, 15, and 19, Gross et al. discloses a weapon mounted cursor control device that may be used by both right and left-handed users. It is noted that Gross et al. does not specifically teach that the weapon mounted cursor control device is a miniaturized joystick. However, Hawkes et al. teaches that the weapon mounted cursor control device could be a joystick (column 2, lines 40-46). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Gross et al. weapon mounted cursor control device as a miniaturized joystick since Hawkes et al. further mentions that any two-axis control device would be appropriate.

35. Claims 20-26, 33-34, and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al.

36. Regarding claims 20-22, Gross et al. teaches a weapon mounted cursor control device for interfacing with a computer (Fig 5, ref 550 and column 7, lines 50-56). Although, Gross et al. does not explicitly teach that the software that interfaces said weapon mounted cursor control device with said computer provides a user with a click-and-carry method of cursor control. However, it is the examiner's position that such features of a click-and-carry method of cursor control is old and well known in the art because it is a common method for human-to-computer interface.

37. Regarding claims 23-26, Gross et al. does not teach the specific click-and-carry method of selecting, picking up, and releasing a graphical object. However, it is also the examiner's position that such features of selecting, carrying, and releasing a graphical object is old and well known in the art. For example, laptop computers offer the same specific method of selecting, carrying, and releasing graphical objects as disclosed by the applicant.

38. Regarding claims 33 and 34, Gross et al. teaches a method of composing messages with a cursor control device for transmission by a portable system to selected recipients utilizing said cursor control device (see column 6, lines 62-63). Gross does not teach the specific menus containing groups of words and numbers. It is furthermore the examiner's position that such features of using the specific menus containing groups of words and numbers is old and well known. For example, most cell phone software interfaces provide the user with pre-formed word groups, such as "How are you today". This word group can be selected and placed in a text box for transmission to a recipient using the same cell phone software interface.

39. Regarding claims 36-38, Gross et al. discloses a weapon mounted cursor control device wherein the device comprises a first mechanism for controlling a cursor and at least a second mechanism for performing control, selection, or action functions. Gross et al. does not teach the specific method of selection of graphical icons with a cursor. However, it is the examiner's position that such features of selecting a graphical object with a cursor is old and well known in the art. For example, in the Windows™ environment, an icon can be selected by a mechanism whereby each successive time said mechanism is depressed the software positions the cursor proximal to at least a second geographical icon.

40. Claims 27 –32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gross et al. (U.S. Patent No. 5,864,481) in view of Ng (U.S. Patent No. 6,235,420 B1). Gross teaches the use of batteries to power the system (column 10, lines 17-18).

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41. Regarding claims 27 and 28, Gross et al. does not specifically teach a battery pack comprising a removable first battery half and a second battery half, and that one battery half is capable of providing power to the system. Ng teaches a battery pack comprising a removable first battery half and a second battery half, and that one battery half is capable of providing power to the system (see column 3, line 63 and column 1, lines 50-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Gross et al. system with such a battery pack as taught by Ng, since multiple power sources are commonly used in electronic devices to provide an auxiliary power source if needed.

42. Regarding claim 29, Gross et al. teaches an input/output device that can route power from one power source. Gross et al. does not teach an input/output device capable of routing power from multiple power sources. Ng discloses a power source that consists of two power sources, whereby the first or second power source can independently power a system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the Gross et al. input/output device with the Ng power supply. If a multiple power supply is to be utilized in a system, it is obvious that the input/output device must be capable of routing power from both supplies.

43. Regarding claim 30 and 31, Gross et al. teaches the input/output device and a mechanism to switch between images for display (column 5, line 57).

44. Regarding Claim 32, Gross et al. teaches an input/output further including a mechanism capable of transmitting to a high-resolution display (see column 5, lines 59-67).

Conclusion

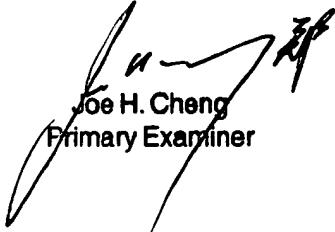
45. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ogura et al. (U.S. Patent No. 5,907,327) – discloses apparatus and method of drag Locking.
- Felsenstein et al. (U.S. Patent No. 5,781,913) – discloses a wearable system.

46. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cameron Saadat whose telephone number is 703-305-5490. The examiner can normally be reached on M-F 8:00 - 4:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 703-308-4119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

CS
May 3, 2002



Joe H. Cheng
Primary Examiner

Attachment for PTO-948 (Rev. 03/01. or earlier)

6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01. or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTO-37), the new drawings MUST be filed within the THREE MONTH statutory period set for reply in the Notice of Allowability. Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, MUST be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings MUST be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in ABANDONMENT of the application.